Fabrication and Mechanical properties of Supercharged polypeptides based Biomaterials: from Adhesives to Fibers

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Stellingen

Behorende bij het proefschrift

Fabrication and Mechanical Properties of Supercharged Polypeptides based Biomaterials: from Adhesives to Fibers

Jing Sun

1. Protein-based biomaterials, for example, spider silks are remarkable natural polymers that show a combination of high mechanical strength and extensibility. (This thesis)
2. Electrostatic interactions have been applied to fabricate various supercharged polypeptide-based biomaterials and cation-π interactions can be used to improve the resulting biomaterials mechanics. (This thesis)
3. The strongest biological adhesive with biocompatible, biodegradable, and tissue regenerating properties has been developed by avoiding covalent bond formation during the adhesion process and introducing exclusively flexible supramolecular interactions. (Chapters 2 and 3)
4. The biomimetic strategy is one of the best methods to fabricate functional biomaterials from simple building blocks. (Chapter 4)
5. Light-responsive biomaterials have been extensively used for controlling biomaterial behavior due to the possibility of manipulating properties with high spatiotemporal control in a non-invasive fashion. (Chapter 5)
6. A rejection letter you received will make you better than before.
7. Experience and theory are important to guide your research project, but it should not be the reason that prevents you from trying.
8. You'll experience all four seasons in one day in the Netherlands.